Learning Spaces, Learning Labs, and MOOCs: merging the real and the virtual in connected learning.

Theme 2: Institutional Models

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Abstract

Many traditional universities face the question whether to embrace MOOCs as an additional business model. Although many have an established income, from often subsidized higher education, with regular students on-campus, uncertainties on future public financing and both the interesting features of MOOCs as well as the possible competition from them are urging a rethink.

Very attractive are the learning analytics made possible in online course interaction, which yields data lacking in face-to-face courses. On the other hand, the massive student response to MOOCs shows a potential in terms of visibility and the possibility to recruit talented students.

At the same time, however, universities are reaping the benefits of an evolution that is almost as recent, where those universities that possess large real estate assets, have been investing in improving the physical learning environment for students. These so-called "Learning Spaces", or "Student Centres" offer high-tech equipment in flexible and multifunctional environments, which are highly "wired" and merge seamlessly with the virtual learning environments of the universities. In some cases these facilities are complemented by complete research labs where new learning interactivity is tested.

It is our conviction that universities can use this infrastructure as a complementary strength in the development of MOOCs that have a high degree of physical persistence, and maximize the interaction between presential and distance students, to the benefit of both students groups. It is, we will argue, one of the possible routes towards MOOCs that go beyond recorded lectures and lectures that go beyond unidirectional teaching. We will discuss some real examples and propose a Learning Lab Network.

Introduction

As argued elsewhere (Touzé and Truyen 2013), where part of the criticism on MOOCs is directed at the loss of social contact and poor interaction – where MOOCs are supposedly copying old-style university lectures, joining MOOC usage to existing learning infrastructure in colleges and universities can combine the best of both worlds. It is also a natural step from efforts already undertaken with the introduction of Open and Distance Learning to solve issues in Multi-Campus education (Truyen, Van Dorp and Janssen 2011). In this paper we give two "best practice" examples of Learning Centres that are integrating virtual, online Learning in Flipped Classroom conditions.

Agora Learning space

AGORA (http://agora.ghum.kuleuven.be) is a new learning center in the city center of Leuven where students can meet up, study together, work on papers, collaborate on group work projects, practice for presentations, view and edit multimedia, have a coffee, and much more. Keywords are comfortable, flexible, informal, multimedia, social, student centered and accessible. In short, AGORA is a learning hub where information, infrastructure, multimedia and people come together. The project is an initiative of the Humanities and Social Sciences Group and is dedicated to providing a fully-equipped learning center for all KU Leuven students. The university's overcrowded libraries clearly attest to the need for extra capacity, especially as the student population increases. With AGORA, KU Leuven wants to do more to meet this need than simply add another study hall. By offering interactive multimedia technology, flexible and extended opening hours and a comfortable, social learning environment, KU Leuven aims to provide a sustainable, structural answer to the needs of all current and future students of our university. The learning process can take many forms, from individual study to collaborative work on papers and presentations. To ensure that all learning types are accommodated, AGORA offers an extensive array of multimedia tools, including interactive displays, document cameras, video editing suites, wide-screen monitors, etc. By studying and working together in a social learning environment, students are better prepared to thrive in the workplace. The experiences of learning centers abroad clearly affirm that an informal, social learning environment stimulates and motivates students.

The KU Leuven Agora Learning space is a 2500 m2 infrastructure for students, where they can study at their own pace in an informal setting. The university made this investment as an answer to an relatively new phenomenon, where students choose increasingly to study at the libraries instead of in their student homes. Students value the social environment of their peers to keep up the discipline required for prolonged study.

Confronted with a growing percentage of students in the libraries – in the sense that those library visitors were not necessarily consulting the library holdings but were rather studying their courses – the council for the Humanities and Social sciences ordered a study in 2007 to add a dedicated learning space (Abraham & Truyen, 2008). This would free up the libraries for regular library users, such as researchers or thesis students. A delegation visited several learning grids in the central UK, like Sheffield and Warwick. At the same time, a requirements analysis was made, involving the student community. One can see the life occupancy of the different libraries and learning centers on the site "Blokken in Leuven" (http://www.blokkeninleuven.be) . "Blokken" is the Dutch word for studying for exams.

To prepare a University policy, study visits were made to several existing learning spaces in the UK (a.o. Sheffield and Warwick) & the Netherlands (TU Delft, Avans). A report was presented to the university board, and finally a decision was made to convert the old institute of Pharmaceutics, a historic building, into a modern learning center. The fact that this building is protected heritage posed some challenges but also held some interesting opportunities to merge tradition and modernity, one of the central themes at KU Leuven.

While at the beginning it was conceived to provide a lot of computers, in then end the choice was made for a Bring Your Own Device concept. However, maximal connectivity and power outlets have been provisioned, and there is also a university ICT support center integrated.

The center as several types of rooms:

- A flexispace
- Silent study spaces
- TimeOut Zone
- Group work rooms

Flexispace

The flexispace is a social study area with flexible furniture that students can arrange as they like. It can also be rearranged for specific cyclic moments in the study calendar, e.g. to make more room for silent study during exam preparation periods. Large screens have been provided so that students can share the display of their laptops to work together.

Silent Study spaces

In the silent study spaces the students can study in silence. Talking is not allowed, nor is food. It requires a lot of advanced acclimatization and acoustic technology to make silent study spaces that allow for prolonged study. An extra challenge was that the old furniture in one of the rooms was protected as heritage, so some creative design solutions were needed. The result is an absolutely unique environment. For the students these are the most important facilities, it was for that reason, to be able to study together in silence, that they invaded the libraries in the first place.

TimeOut Zone

In the timeout zone students can enjoy drinks and cold food, there are also distribution machines (not only for food and drinks but also for small ICT gadgets) and comfortable seating.

Group work rooms

The group work rooms can be reserved by the students, to do group work. They feature large shared displays. There are two types available at Agora: stand Group work rooms where about 8 to 10 students can collaborate; and multimedia rooms where advanced video editing hard- and software is available, and also videoconferencing facilities. One of the rooms has been organized in such a way that students can easily practice presentations. Through the videoconferencing facilities, students can work together with students at other campuses of the University association.

Students can use a reservation tool to book group work or multimedia rooms. This student-centered infrastructure allows to offload teaching tasks to student activities, where the student takes the responsibility for his/her learning.

Flipped classroom and the importance of Open

Of course, the innovative student space leads to pressure on teaching: students expect teachers to make better use of the opportunities offered by the learning center. Plans are being made to add flexible classroom spaces to that end. The fact that students can work together in a high bandwidth environment with large screens, means they also want as much as possible course information online, including weblectures. This means professors feel the pressure to make their VLE courses, which are now mostly meant to support the classroom teaching (blended learning); more complete so that they become real ODL courses. This of course makes the step to opening this content up to a MOOC environment much smaller.

Students stress the need to be provided with open learning materials, that they can integrate in their own Personal Learning Environments and collaboratively edit in the Learning Space (Truyen and Verbeken 2012). They value open formats and availability of weblectures, knowledge clips and other interaction recordings so that they can *reuse*, *redistribute*, *revise* and *remix* them (Hilton, Wiley, et al. 2010). Learning spaces should offer the support to facilitate these activities. This also implies training students in the necessary ICT skills to do so (Truyen, Vanthienen and Poelmans 2011).

Learning Lab

The use of new technologies combined with the evolution in methodologies for knowledge and competence development has a profound impact on traditional pedagogies, both in college as well as in enterprises.

In the context of their collaboration, the Ecole Centrale de Lyon and the EMLYON Business School have responded to this challenge by creating the LearningLab – a laboratory dedicated to the research and experimentation into pedagogical innovation (http://www.learninglabeducation.com).

The LearningLab is a space for experiment, for formalisation and transfer of pedagogical innovation towards teachers and students, and it is also open to enterprises. Its objective is to invent, experiment and disseminate new practices by linking technology, methodology and work environment.

Learning together in new ways !

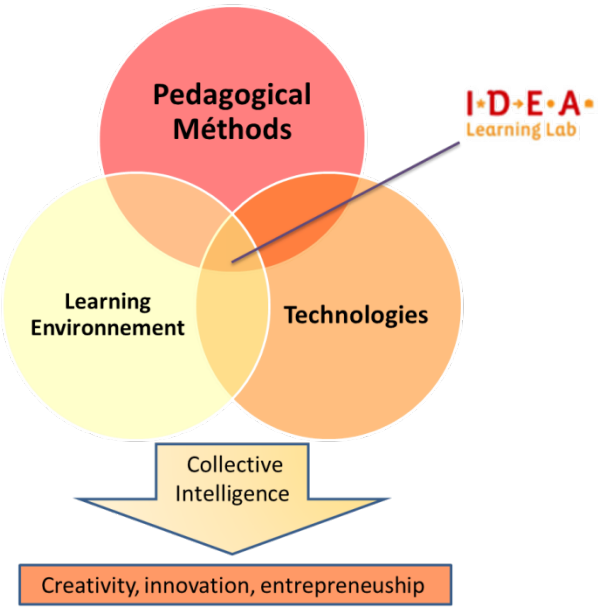
The LearningLab wants to be a place for technological experimentation and exploration of innovative educational methods, both in relation to their usage as well as their deployment.

More precisely, this laboratory is interested in the study and practical implementation of collaborative intelligence and creativity. The basic idea is to study methods and tools that allow people with different and complementary competences to conceive and co-create innovative solutions to solve multidisciplinary problems.

Experimentation place

The LearningLab wants to develop and disseminate pedagogical innovations in three domains:

- Innovative pedagogical methods and new learning supports
- Emerging technologies and their new usages
- The material and human preconditions favoring learning performance



In parallel, its vocation is to test in life conditions practices and usage scenarios linked to new modular learning frameworks open to creativity, such as haptic interfaces (tablets, haptic tables, TBI, E-book readers etc.), group interactivity, collaboration tools, simulation softwares.

IDEFI funding and entreprise partnerships

The LearningLab is one of three pillars of the I.D.E.A. project framework (Innovation, Design, Entrepreneurship & Arts), common for the two schools and funded in the context of the IDEFI (Initiatives d'excellence en formations innovantes – Initiatives of Excellence in Innovative Training) call for proposals with a budget of 6,3 M€.

Partnerships have been forged with HP, Promethean, Steelcase, Gostai (Aldebaran Robotics), Arthesis diffusion, Marmonier, a.o.

A vision for the next 10 years

The LearningLab wants to be a reference in France, in Europe and beyond in the domain of pedagogical innovation in higher education, more specifically in contexts of creative efforts in multidisciplinary research groups.

It also wants to establish an international network of Learning Labs that share the same philosophy.

MOOCs @ college

When we look at what MOOCs could mean for traditional college, presential education, we can immediately see a link with current VLE's or online learning environments that are already mainstream in blended learning. Many universities have implemented a VLE and through the years added a lot of functionalities, such a s social software extensions, that give them MOOC like functionalities (in the case of Canvas e.g., or Blackboard Coursesites, the MOOC environment is in fact an extension of a VLE software system).

The question is then how far have these universities already gone in merging the real and the virtual in their Campus experience: how much from the real life teaching environment have they uploaded to the VLE? Note that there is an inner logic to do so: students like well documented rules and agreements; which means more and more procedural information is added to VLE course content, making explicit information communicated in class. This offers a good basis to make a step towards a complete online environment such as a MOOC.

Since universities made efforts to integrate their VLE's with their administrative environment, and eg automatically enroll students into the courses they take, giving access to legacy VLE's for non-registered students often proves very cumbersome. Moreover, the authentication systems are not fit to registering thousands of loosely verifiable accounts.

This means many universities that do already have very large VLE's running will still be interested to look for other solutions for their MOOCs, and join specific MOOC providers. This is where an opportunity arises to find more common ground. Joining registered, on-campus students with students unknown to the organization in a MOOC environment offers new challenges.

MOOC scenario's for expanding on traditional on-campus education:

- Running a MOOC and a college course in parallel: regular students also subscribe to the MOOC; the MOOC replaces the traditional VLE;
- Offering transition and/or preparatory courses through MOOCs: the MOOC replaces existing courses for students abroad that want to prepare and need to fill some gaps.

- Internationalizing a course through a MOOC: a network of academics produces collaboratively a MOOC, which is then followed by regular students at the different participating institutions
- Accepting MOOC accomplishment certificates for credits, so that students can opt to follow the MOOC instead of the existing classes
- MOOCs can of course offer added flexibility to work students
- Regular students could take up roles as teaching assistants or tutors in a MOOC; MOOCs offer yet another opportunity to diversify roles in a course
- A traditional university has several resources that can expand on the MOOC concept; such as infrastructure, lecture rooms, (digital) libraries etc.

When the same Online course is followed by online subscribers and students registered at a University in the context of their formal education, we get of course a very interesting scenario (Assante and Truyen 2011).

Making a hybrid environment that merges MOOC potential with existing infrastructure and real life interaction on Campus is certainly worthwhile exploring.

LACE

Literature and Change in Europe (LACE) is an example of a MOOC where we mix registered students at 7 partner universities with online MOOC subscribers (Kuppens, Truyen, and Baetens 2011). Building on a long experience with running an online course between the partners, supported by Erasmus staff exchange, we were able to setup a MOOC with relatively little effort. The MOOC runs in parallel with the academic semester. LACE will start in October 2013 on the Canvas Network (http://www.canvas.net).

While LACE content situates itself at the masters level for a rather specialized topic, we acknowledge that there is a wider interest from members of the general public. In this sense the MOOC helps to link up academia with a broader community. At the different campuses of participating universities, students can have RL meetings on the MOOCs in the learning space. How this can be opened up to non-university registered MOOC participants has yet to be explored.

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